

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

**PARKER-HANNIFIN CORP. and
PARKER INTANGIBLES LLC,**

Plaintiffs,

VS.

CHAMPION LABORATORIES, INC.

Defendant.

CASE NO. 1:06-CV-2616

JUDGE PATRICIA A. GAUGHAN

Memorandum of Opinion and Order

INTRODUCTION

This matter is before the Court upon plaintiffs’ merit brief on damages (Doc. 33), defendant’s merit brief on damages (Doc. 32)¹, defendant’s motion to exclude Terry L. Musika’s opinion on a reasonable royalty (Doc. 38), defendant’s motion to exclude U.S. Patent No. RE38,917 (Doc. 39), defendant’s motion to exclude certain testimony of Charles

1

Plaintiffs complain that the Court's schedule provided only for plaintiffs to file an opening merit brief and for defendant to oppose. However, plaintiffs have not been prejudiced by defendant's opening brief. In fact, plaintiffs have filed an opposition thereto.

A. Garris, Ph.D. (Doc. 41) and defendant's motion for leave to supplement (Doc. 51). This is a patent infringement suit.

Defendant has conceded that its LP2017 oil filter element infringes at least one claim of U.S. Patent No. 6,983,851 ("the '851 Patent"). The parties ask the Court to determine the proper quantum of damages, based on a reasonable royalty, for the provisional rights period of the '851 Patent. The parties also ask the Court to determine the proper measure of damages - either a reasonable royalty or lost profits - for the infringement period and the quantum of such damages. For the reasons that follow, the Court awards plaintiffs \$86,500 for the provisional rights period. The Court further awards plaintiffs their lost profits in the amount of \$543,982 for the infringement period. The Court declines in its discretion to award prejudgment interest. For the reasons that follow, defendant's motion to exclude the U.S. Patent No. RE38,917 is DENIED. Defendant's motion to exclude the testimony of Dr. Garris is DENIED. Defendant's motion to exclude the testimony of Mr. Musika is DENIED. Defendant's motion for leave to supplement is DENIED.

FACTS

Parker Intangibles LLC, as the owner of the '851 Patent, and Parker-Hannifin Corp., as the exclusive licensee (collectively, "Parker" or "plaintiffs"), bring this action against Champion Laboratories, Inc. ("Champion" or "defendant") for patent infringement. In their complaint, plaintiffs allege willful infringement and inducement of infringement of the '851 Patent and U.S. Patent No. 6,554,139 ("the '139 Patent"). Defendant has stipulated that its LP2017 filter element infringes one or more claims of the '851 Patent. Plaintiffs have waived their allegation of willful infringement and withdrawn their demand for a jury trial. The

parties have agreed that this Court shall determine the proper measure and amount of damages. The parties have waived their rights to appeal. (Doc. 19)

In May 1999, plaintiffs conceived of an oil filtration system in cooperation with Ford Motor Company, the seller of F-series trucks and E-series vans, Hengst, a designer and manufacturer of filter elements, and International Truck and Engine Company (“ITEC”), the manufacturer of the engines for the Ford trucks and vans. Plaintiffs have received several patents for the inventions encompassed in the oil filtration system. This oil filtration system includes an oil filter assembly that is built into the engine of the Ford trucks and vans. The assembly contains a filter housing. The housing is the portion of the assembly that holds the filter element. The filter element is the portion of the filter assembly that is removed and replaced when a user changes the oil on his vehicle.

The housing also contains a support core, which has a locking assembly. The locking assembly prevents an end user who is changing a dirty filter element from installing a filter element that lacks certain characteristics. Specifically, the ‘139 Patent requires the filter element to have “a series of protrusions” that extend outward from the filter element. When an element with these protrusions is inserted into the core support, the locking assembly is engaged. Only when the locking assembly is engaged can the cover to the assembly be replaced. Thus, the locking assembly prevents an end user from forgetting to install a new filter element or from installing a filter element without protrusions after a dirty filter has been removed. Beginning in 2001, plaintiffs produced and sold a commercial embodiment of a filter element with protrusions as the PF L2016 filter element (“Parker’s filter element”). Defendant was a customer of plaintiffs. Plaintiffs sold their filters to defendant and

defendant, as an after-market distributor, resold these filters to oil change facilities, auto parts stores and Ford vehicle owners.

At some point, defendant decided to design its own filter element. Defendant's original filter element - the LP2017 - was designed to avoid infringement of the '139 Patent. The '139 Patent required the filter element to contain "a series of protrusions." Defendant developed its filter element to have only one protrusion. In October 2004, defendant ceased purchasing Parker's filter element and began selling its own LP2017 filter element.

On November 16, 2004, arguably in response to defendant's introduction of its own filter element, plaintiffs filed patent application number 989,776 ("the '776 application"), claiming priority to the '139 Patent. The '776 application was published on June 16, 2005 and eventually matured into the '851 Patent. Certain of the claims of the '851 Patent are broader than those found in the '139 Patent. The '851 Patent claims simply require the filter element to have "at least one protrusion." Defendant admits that its LP2017 filter element infringes at least one claim of the '851 Patent.²

After the '851 Patent issued, defendant began work on a new filter that would not infringe the '851 Patent. On October 31, 2006, defendant took its LP2017 filter element (the "Infringing Filter") off the market and replaced it with a redesigned filter element. The redesigned filter element is comprised of two parts - a "core adapter", which is inserted into the filter assembly and remains there for the life of the engine, and the removable filter element (collectively, the "Core Adapter"). The Core Adapter engages the locking assembly that is built into the vehicle's engine so that a non-infringing filter element (that is, one

²

Neither party states which claim(s) is/are infringed.

without a protrusion) may be used.

Defendant does not dispute that plaintiffs acquired provisional rights in the '851 patent upon its publication on June 16, 2005. The parties agree that a reasonable royalty is the proper measure of damages for the period between publication of the application and issuance of the patent (the "Provisional Rights Period"). However, they disagree on the quantum of that reasonable royalty.

The '851 Patent issued on January 10, 2006, at which time plaintiffs acquired full patent rights. The parties agree that the infringement damages period extends from January 10, 2006 to October 31, 2006, at which time defendant ceased selling its infringing filter element (the "Infringement Period"). Plaintiffs assert they are entitled to lost profits for the infringement period. Defendant argues that plaintiffs have not met their burden of establishing that lost profits are due. Instead, defendant contends a reasonable royalty should be awarded for the infringement period. Plaintiffs also oppose each of defendant's motions to exclude and defendant's motion for leave to supplement.

DISCUSSION

A. Motions to Exclude

Defendant has filed three motions to exclude. Two of the motions seek to exclude expert testimony pursuant to Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993). Rule 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable

principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702.

1. Motion to Exclude Opinion of Dr. Garris

Dr. Garris is plaintiffs' technical expert. He opined on the absence of acceptable, available non-infringing substitutes for Parker's patented filter element. The absence of such substitutes is relevant to whether plaintiffs are entitled to lost profits as the measure of their damages for the Infringement Period.

Defendant's primary complaint is that Dr. Garris is not a patent law expert. This argument is specious, at best. Patent law experts do not offer opinions on technical matters. *E.g., Landers v. Sideways, LLC*, 142 Fed. Appx. 462, 467 n.3 (Fed. Cir. 2005) (non-precedential) ("On remand, we caution the district court regarding its reliance on testimony from any patent attorney on technical issues, as opposed to issues concerning legal procedure. In particular, a patent expert should not be permitted to construe claim terms unless he is first qualified as an expert in the pertinent art.").

Accordingly, technical experts are generally called in to render opinions on the understanding of one of skill in the art, the scope of patent claims as would be understood by that hypothetical person of skill in the art, and whether certain products infringe those claims as so construed.³ As to Dr. Garris' technical qualifications, the Court finds that he is

3

Defendant emphasizes that claim construction is a matter for the Court and infringement is for the trier of fact. These statements are both true. However, such truisms do not preclude the Court from accepting expert opinions where such opinions will assist it in understanding the evidence or determining a fact in issue.

eminently qualified to opine on the scope of the straight-forward claims at issue and whether certain substitutes infringe those claims. Dr. Garriss holds a Ph.D. in mechanical engineering from the State University of New York at Stony Brook. He has been a professor of mechanical engineering at the George Washington University for over twenty years and has particular experience in vehicle engine filtration systems. The Court will not exclude his testimony on the ground that he is not qualified to render his opinions.

Defendant also argues that Dr. Garriss' infringement analyses are not the product of reliable principles and methods. Defendant criticizes Dr. Garriss' conclusion that a substitute filter element sold by a competitor named Baldwin infringes the '851 Patent under the doctrine of equivalents. Defendant contends that Dr. Garriss ignores the requirement of the patent claims that the protrusions be "permanently fixed" to the end cap of the filter. The protrusions on Baldwin's end cap are not permanently fixed. As will be explained in more detail below in connection with the discussion of the proper measure of damages, the Court finds the Baldwin filter was not an "available" substitute. Therefore the Court need not reach whether Dr. Garriss' infringement analysis is reliable.⁴

Defendant next complains that there are insufficient facts upon which to base Dr. Garriss' opinion that defendant's Core Adapter filter is an "unacceptable" substitute. Dr. Garriss based his opinion, in part, on tests performed by plaintiffs demonstrating that the Core Adapter filter did not meet certain standards set forth by ITEC, the manufacturer of the vehicle engine that contains the filter assembly. As will be discussed below, the Court finds

4

The Court notes that defendant failed to proffer its own technical expert opinion to rebut any of the matters considered by Dr. Garriss.

that the Core Adapter filter was not an “available” substitute. Thus, the Court need not reach whether or not the Core Adapter is an acceptable substitute or whether or not Dr. Garris’ opinion on this point is sufficiently supported.

Defendant also argues that there are insufficient facts in support of Dr. Garris’ opinion that there is consumer demand for the patented features of Parker’s filter element. Plaintiffs must prove demand for the patented features, among other things, to be entitled to lost profits. As will be discussed below, plaintiffs offer several pieces of evidence to support a finding that there is demand for the patented features of their filter element. One such piece of evidence is the substantial sales of defendant’s own infringing filter. Because the Court can rest its finding of demand for the patented feature on the sales of defendant’s infringing filter, the Court need not decide whether Dr. Garris’ opinion regarding consumer demand is sufficiently supported by the facts.

Defendant’s motion to exclude the testimony of Dr. Garris is denied.

2. *Motion to Exclude Opinion of Terry Musika*

Defendant also moves to exclude certain portions of the opinion of Terry Musika pursuant to Rule 702 and *Daubert*. Plaintiffs contend they are entitled to the profits they lost during the Infringement Period. In the event the Court determines plaintiffs are not entitled to lost profits, the parties agree that plaintiffs should receive a reasonable royalty. A reasonable royalty must also be calculated for the Provisional Rights Period. In deciding what a reasonable royalty would be, the Court engages in a hypothetical negotiation between the parties. Factors to be considered in this hypothetical negotiation are set forth in *Georgia Pacific Corp. v. U.S. Plywood Corp.*, 318 F.Supp. 1116 (S.D. N.Y. 1970). Plaintiffs offer the

opinion of Mr. Musika on what this reasonable royalty should be.

Defendant makes several arguments in support of its motion to exclude Mr. Musika's opinion on a reasonable royalty. Defendant first argues that Mr. Musika deviated from generally accepted practices in setting up the hypothetical negotiation used to determine the reasonable royalty rate. Defendant disapproves of Mr. Musika's decision to begin his analysis with a determination that the parties would have certain beginning reference points in mind when entering the hypothetical negotiation. Defendant contends that no willing licensee would enter into discussions at the reference points proposed by Mr. Musika and complains that there is no "overlap" between the parties' reference points in Mr. Musika's hypothetical negotiation.

The Court finds that Mr. Musika's methodology is reliable. It is supported by the American Institute of Certified Public Accountants' "Valuing Intellectual Property and Calculating Infringement Damages", which outlines how a damages expert might arrive at a reference point before constructing the hypothetical negotiation. Defendant makes much of the fact that a new version of this article has been published; however, defendant fails to state whether the methodology relied upon by Mr. Musika was deleted from or changed in any way in this more recent version. Moreover, the article's self-description as "non-authoritative" merely distinguishes it as one source for information and methods rather than the only source. Such a statement does not render it wholly unreliable, as defendant suggests. The Court will not exclude Mr. Musika's opinion on this ground.

Defendant also argues that Mr. Musika's reference point for defendant was arbitrary and left unexplained. To the contrary, Mr. Musika explained that he looked at defendant's

profit margin on its Infringing Filter and compared that margin to the margin defendant makes on its other products. Mr. Musika then concluded based on his decades of accounting experience and knowledge, among other things, that defendant would be willing to sacrifice a part of that profit margin to enter into the hypothetical negotiation. The Court finds this method sufficiently reliable.

Defendant next argues that Mr. Musika applied an unreliable methodology in measuring plaintiffs' average sales price, which is relevant to Mr. Musika's calculation of an appropriate reference point for the hypothetical negotiation. Specifically, Mr. Musika excluded as statistical outliers those sales made to Wal-Mart. Wal-Mart pays a lower price than that paid by customers such as defendant. Plaintiffs explain that sales to Wal-Mart are not properly considered part of the same market as plaintiffs' sales to customers such as defendant, and defendant does not offer any opinion or evidence to rebut this point. Mr. Musika further states that the Wal-Mart sales constituted only 2.2% of plaintiffs' total sales of its filter element. The Court finds that Mr. Musika's methodology is not unreliable because he excluded the sales to Wal-Mart as statistical outliers.

Defendant's motion to exclude Mr. Musika's testimony is denied.

3. *Motion to Preclude Evidence Regarding the '917 Patent*

Defendant moves to preclude use of evidence regarding U.S. Patent Number RE38,917 ("the '917 Patent"). As stated above, to be awarded lost profits, plaintiffs must establish the absence of non-infringing alternatives. In an attempt to meet their burden, plaintiffs introduced evidence in the form of the expert opinion of Dr. Garriss. Dr. Garriss opined that defendant's Core Adapter filter infringes the '917 Patent. Defendants argue such

an opinion is inappropriate because it constitutes a “backdoor” determination of infringement of a patent other than the patent-in-suit. The Court need not reach this question, because the Court determines that defendant’s Core Adapter filter was not available during the Infringement Period. Defendant’s motion to preclude the ‘917 Patent is denied.

B. Merits Briefs

1. Damages for the Infringement Period

Each party has submitted a brief on the proper measure and amount of damages.⁵ The parties agree that the infringement period extends from January 10, 2006 to October 31, 2006. The parties also agree that the minimum measure of damages in a patent case is a reasonable royalty. 35 U.S.C. § 284 (“the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court”). To adequately compensate for the infringement, the Court must determine what the patentee would have had if the infringer had not infringed. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 507 (1964). The general rule for determining damages to a

5

In support of their brief, plaintiffs submit the declarations of Kathy Edge, marketing manager for the Racor Division of Parker, Dr. Charles Garris, Jr., a technical expert offering an opinion on whether acceptable, non-infringing alternatives were available during the infringement period, and Terry Musika, an accountant offering an expert opinion on the measure and quantum of damages.

Defendant submits the declarations of John Gaither, vice president of engineering and quality control at Champion, Dr. William Choi, an economist offering an expert opinion on damages, Jason Snider, a product design engineer at Champion, and John Stockhowe, design manager at Champion.

patentee that is itself producing the patented item is to determine the profits lost because of the infringement. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (citations omitted). To recover lost profits damages, the patentee must show a reasonable probability that, “but for” the infringement, it would have made the sales that were made by the infringer. *Id.*

Courts apply a four-factor test in determining whether to award lost profits damages. *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978); *Rite-Hite*, 56 F.3d at 1545 (citing *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1577 (Fed. Cir. 1989)). The *Panduit* test requires that a patentee establish: (1) demand for the patented product; (2) absence of acceptable non-infringing substitutes; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of the profit it would have made. *Panduit*, 575 F.2d at 1156.

A showing under *Panduit* permits a court to reasonably infer that the lost profits claimed were in fact caused by the infringing sales, thus establishing a patentee’s prima facie case with respect to “but for” causation. A patentee need not negate every possibility that the purchaser might not have purchased a product other than its own, absent the infringement. The patentee need only show that there was a reasonable probability that the sales would have been made “but for” the infringement. When the patentee establishes the reasonableness of this inference, *e.g.*, by satisfying the *Panduit* test, it has sustained the burden of proving entitlement to lost profits due to the infringing sales. The burden then shifts to the infringer to show that the inference is unreasonable for some or all of the lost sales.

Rite-Hite, 56 F.3d at 1545. Plaintiff need only establish this “but for” causation by a preponderance of the evidence. *Yarway Corp. v. Eur-Control U.S.A., Inc.*, 775 F.2d 268, 275 (Fed. Cir. 1985).

a. Demand for the Patented Product

The first *Panduit* factor requires plaintiffs to establish demand for the patented features of their oil filter. Plaintiffs assert that the simple fact that defendant sold a substantial number of infringing filters satisfies this element. *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 552 (Fed. Cir. 1984) (“proof of a substantial number of infringing sales has been deemed ‘compelling evidence of the demand for the [patented] product.’”).

In the two fiscal years prior to infringement, defendant purchased from plaintiffs and resold approximately 69,000 filters. Defendant introduced the LP2017 filter in October 2004. During the Infringement Period, from January 10, 2006 to October 31, 2006, defendant sold 188,229 of its Infringing Filters. Plaintiffs’ expert Mr. Musika opines that this is a “substantial” number of infringing sales.⁶ In fact, defendant itself characterizes its sales as “substantial.” Def. Opening Brief at 3.

Moreover, defendant does not dispute the holding of *Gyromat* or its application to the facts of this case. Instead, defendant argues only that substantial sales of its non-infringing Core Adapter prove that customer demand is not linked to the patented features of plaintiff’s filter. Unfortunately for defendant, the *Gyromat* court considered just such an argument and rejected it. In the *Gyromat* case, the Court of Appeals for the Federal Circuit found that proof of sales of an infringing product was sufficient to establish demand for the patented product even where defendant demonstrated sales of a non-infringing product. *Gyromat*, 735 F.2d at

⁶

During the relevant years, plaintiffs sold from 1.3 to 1.8 million filters per year.

552. Accordingly, this Court finds that the sale of 188,229 Infringing Filters is substantial and is sufficient to establish there was demand for the patented features of plaintiffs' product.⁷

b. Absence of Acceptable, Available Non-Infringing Substitutes

Plaintiffs have the burden of showing that there were no substitutes available during the infringement period that were acceptable and non-infringing. *E.g., Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119 (Fed. Cir. 2003). Such a showing permits the Court to reasonably infer that but for defendant's infringing sales, plaintiffs would have captured those sales. Defendant contends there are five acceptable, available non-infringing alternatives: (1) defendant's Core Adapter; (2) filter #57314 by Wix Filtration Corporation; (3) filter #L45515 by Purolator; (4) filter #P7235 by Baldwin; and (5) "knock-off" filters imported by various "Asian" manufacturers.

If the plaintiff establishes that the alleged alternative was not actually on the market during the infringement period, the burden shifts to the accused infringer to show that the substitute was available. *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 185 F.3d 1341, 1353 (Fed. Cir. 1999). "Mere speculation or conclusory assertions will not suffice to

7

Plaintiffs also argue that demand is established by their own marketing materials. The Court disagrees. The case relied upon by plaintiffs for this proposition, *Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543 (Fed. Cir. 1997), actually states that when an *infringer* touts the patented features in its marketing materials, that is evidence of demand for those features.

Plaintiffs further attempt to rely upon the expert opinion of Dr. Garriss that end users desire the patented features. Because the Court has found that demand is proven by substantial sales of the infringing filter, the Court does not rely upon Dr. Garriss' opinion in finding that plaintiff has demonstrated demand.

overcome the inference. After all, the infringer chose to produce the infringing, rather than noninfringing, product. Thus, the trial court must proceed with caution in assessing proof of the availability of substitutes not actually sold during the period of infringement.” *Id.*

The Court addresses the Asian filters first. During discovery, plaintiffs asked defendant to identify all filters it might rely upon as available, acceptable non-infringing alternatives. Defendant did not disclose the Asian filters as possible alternatives. Plaintiffs thus argue defendant should be precluded from relying on them now. The Court agrees. The question is not, as defendant contends, whether plaintiffs knew of the existence of the Asian filters and should have guessed they would be put forth as an alternative. Rather, the question is whether plaintiffs will be prejudiced by defendant’s failure to disclose them as such during discovery. The Court finds plaintiffs would be so prejudiced. Plaintiffs were denied the opportunity to conduct discovery on this point, to evaluate the availability and acceptability of the filters and to develop an opinion on whether they infringe. Accordingly, the Court will not consider the Asian filters.

As for the Wix, Baldwin and Purolator filters, there appears to be no dispute that none of these filters were actually on the market when the Infringement Period began. Plaintiffs state they held 100% of the market before defendant began infringing and defendant does not dispute this fact. Thus, the burden shifts to defendant to demonstrate that at least one of these substitutes was available during the infringement period. Defendant has failed to do so. Defendant offers no evidence of when these filters actually were introduced, providing the Court with no basis to find the filters were or could have been available. Thus, the Court finds that the Wix, Baldwin and Purolator filters were not available during the Infringement

Period.^{8,9}

As to defendant's own Core Adapter, the Court also finds that this alternative was not and could not have been "available" during the Infringement Period. There is no dispute that defendant's Core Adapter filter was not actually on the market during the infringement period. So, plaintiffs have met their initial burden of demonstrating the Core Adapter was not available. Defendant attempts to rebut this showing by putting forth evidence that although the Core Adapter was not on the market, it was "available." Defendant submits the declarations of Mr. Gaither, Mr. Snider and Mr. Stockhowe in support of its position.

In *Grain Processing*, the district court determined that even though defendant's non-infringing process was not on the market during the infringement period, it was "available." The court found that the defendant "had all of the necessary equipment, know-how, and experience to use [the noninfringing process] whenever it chose to do so." *Id.* at 1354. The

8

Instead, defendant argues that the alternatives from these other manufacturers do not infringe. Because the Court has found the alternatives were not available, it is irrelevant whether they infringe. *Micro Chem.*, 318 F.3d at 1124.

9

In connection with whether the Wix filter is a non-infringing alternative, defendant moves the Court for leave to file supplemental authority. (Doc. 51) That supplemental authority comes in the form of an order of the District Court for the Eastern District of California in patent litigation between Parker and Wix. The Order sets forth that court's construction of the claims of one of Parker's patents. Defendant Champion argues that this Court should refer to the California court's claim construction in deciding whether the Wix filter is a non-infringing alternative. Because the Court finds that the Wix filter was not available at the time of infringement, it is immaterial whether it infringes or not. Defendant's motion for leave to supplement is denied.

defendant “did not have to ‘invent around’ the patent. ... all it had to do was use [a known enzyme] in its production process.” *Id.* The district court also found that defendant did not switch to its noninfringing method sooner because it was more expensive and it reasonably believed it was not infringing the patent with its current process. Defendant developed its noninfringing process and moved to full production in the remarkably short period of two weeks.

On the other hand, in *Micro Chem*, the Federal Circuit reversed a finding by the district court that an alternative not actually on the market was “available.” The court of appeals found that the defendant did not have the know-how to make a noninfringing product at the time of infringement. In support of its finding, the court cited evidence that defendant spent 984 hours designing the new product and 330 hours to test it. The court also considered that an engineer spent several months and rejected several other options before settling on the noninfringing alternative. The court concluded that because defendant was required to design-around the patent, the alternative was not “available.”

The application that led to the ‘851 Patent was published in June 2005. The patent issued in January 2006. Mr. Snider declares that he became aware of the published application in September 2005. He was directed to research and develop a new oil filter that would not infringe any claim of the ‘851 Patent. He further states that “[i]n October 2005, [he] and Scott Atteberry developed a redesign to the [infringing] LP2017 filter that eliminated the need for an end cap with any protrusions [*i.e.*, the Core Adapter].” He then states that the “Core Adapter LP2017 was conceived of and reduced to practice in approximately two weeks.” He submitted an invention disclosure form to his management on or about October

20, 2005 detailing the concept and design of the Core Adapter.

Mr. Snider further states that as of October 2005, defendant had the manufacturing ability and the know-how to make the Core Adapter and could have “readied it for market within a couple of months.” Approximately 280 engineering hours were spent in developing the Core Adapter. This equates to seven 40-hour work weeks.¹⁰ Mr. Snider thus concludes that “[h]ad Champion desired to pursue manufacturing of the Core Adapter LP2017 in October 2005, it could have been completed before January 2006.”

This statement begs the question - why did Champion not desire to pursue manufacture of the Core Adapter sooner? Mr. Snider explains that the Core Adapter was not manufactured sooner because “Champion’s management was concerned with the reception of such a different conceptual design by the marketplace.” Another of defendant’s witnesses, Mr. Gaither, admits that the Core Adapter approach was “entirely new.” As a result, he says, defendant decided to conduct “exhaustive testing ... relating to [the Core Adapter’s] performance” before deciding to proceed with the new design.

In connection with this “exhaustive testing”, plaintiffs point out that defendant spent 5,000 hours on such testing. Plaintiffs suggest this large number of testing hours would have prevented defendant from introducing the Core Adapter any earlier than it did. Mr. Snider, however, states that the Core Adapter was actually introduced before the 5,000 hours of testing were completed. Moreover, these tests were run on multiple machines at the same time thus decreasing the number of work days required to complete the testing. For example,

¹⁰

An additional 480 hours (or, twelve 40-hour weeks) were spent on instructions, illustrations, website updates, and patent applications.

if two machines were run for 8 hours, 16 hours of testing would actually have been completed in that 8-hour time-frame.

Finally, Mr. Stockhowe states that, “[a]fter considering other approaches, Champion made the decision to go ahead with the Core Adapter LP2017 in August 2006” and that “[s]amples and molding of the Core Adapter LP2017 were finished by October 2006.” None of the statements made by defendant’s declarants are supported by lab notebooks, meeting minutes, or documents of any kind.¹¹

The Court agrees with plaintiffs that the instant case is more analogous to *Micro Chem* than to *Grain Processing*. Defendant Champion was required to spend thousands of hours designing and testing the Core Adapter. It was a completely new design. Champion’s own documents and declarations indicate that they withheld the design from market even after the ‘851 Patent issued, because they were unsure whether or not it would be acceptable because it was so different from what had been sold before. As to whether defendant was required to hire an outside consultant to assist it with the re-design, the Court expresses some scepticism regarding Mr. Stockhowe’s statement that defendant would dedicate funds and resources to an infringing product embroiled in litigation. Further, Mr. Stockhowe provides no documentation to support his statement. In any event, the number of hours spent to design and make the Core Adapter, together with defendant’s hesitation to introduce the Core

¹¹

Plaintiff also argues that documentary evidence shows defendant was required to hire an outside consultant and purchase a new machine in January 2006 to design and make the Core Adapter, suggesting defendant did not have the know-how and capability to make the Core Adapter any more quickly. Mr. Stockhowe counters that those documents were related to the original infringing PL2017 filter, not the Core Adapter.

Adapter for fear of rejection by the market, are enough to support this Court's determination that the Core Adapter was not available during the Infringement Period.

c. Plaintiffs' Capacity to Meet Demand

Plaintiffs must next establish they could have supplied the entire market. As discussed above, plaintiffs supplied 100% of the market prior to infringement. From July 2004 to June 2005, plaintiffs made and sold 1.8 million filters. During the Infringement Period, plaintiffs sold 1.3 million filters and defendant sold approximately 188,000. There is no evidence of any other sales of any other filters for Ford E-series vans or F-series trucks in the market. Plaintiffs assert the data clearly demonstrate that it had excess manufacturing capacity of approximately 500,000, more than enough capacity to make 188,000 filters if defendant was not in the market. Defendant counters that plaintiffs did not adequately supply the market even before infringement. Defendant cites one complaint from one customer in April 2004 about delays and plaintiffs' inability to fill orders on time. Defendant does not quantify the magnitude of the delays or number of units that were not shipped on time.

The Court finds that plaintiffs have fairly established that they could have met customer demand. Plaintiffs need only establish "but for" causation by a preponderance of the evidence. *Yarway Corp. v. Eur-Control U.S.A., Inc.*, 775 F.2d 268, 275 (Fed. Cir. 1985). Without more, defendant's evidence of supply-chain problems in 2004 does not establish that plaintiffs could not have met market needs in 2006, especially considering plaintiffs sold 1.8 million filters in the 2004-2005 fiscal year.

d. Amount of Lost Sales

Plaintiffs have established demand for their patented product, the absence of available,

acceptable non-infringing alternatives and capacity to meet market demand. Therefore, it is reasonable for the Court to infer that plaintiffs are entitled to lost profits as the measure of their damages. To determine plaintiffs' lost profits, the Court must determine plaintiffs' profit margin per filter and multiply that margin by the number of lost sales. During the Infringement Period, defendant sold 188,229 units. Defendant provides no evidence that plaintiff would not have captured each of these sales. Thus, the Court will multiply 188,229 by plaintiffs' profit margin to arrive at the lost damages award.

Mr. Musika, plaintiffs' accounting expert, determined that plaintiffs' profit margin was \$2.89 per filter. He arrived at this number by starting with the price at which plaintiffs sell their filter. Just before infringement began, defendant was purchasing plaintiffs' filter for \$7.97 per unit. Other customers purchased plaintiffs' filter at prices ranging from \$7.95 to \$13.00. Mr. Musika excluded sales to Wal-Mart as statistical outliers. As discussed above in connection with defendant's motion to exclude Mr. Musika's opinion, the Court finds it was not improper for Mr. Musika to exclude the sales to Wal-Mart in calculating plaintiffs' selling price.

Mr. Musika also excluded plaintiffs' sales to ITEC, the engine manufacturer. In choosing to do so, he relied on a statement from plaintiffs' marketing manager, Kathy Edge, that ITEC is in a different market than that occupied by customers such as defendant - ITEC does not supply the after-market for replacement filters. It purchases the filters to place in the engine when it is manufactured. Defendant offers no rebuttal on this point. Finally, Mr. Musika excluded sales to after-market supplier Purolator, because the price paid by Purolator (\$5.60 per unit) was the result of a settlement agreement entered into on March 27, 2007 and

not determined by market factors. The Court finds Mr. Musika's decision to exclude these sales in calculating plaintiffs' average selling price was not inappropriate.

After determining the sales price, Musika then engaged in a thorough analysis to account for the cost to plaintiffs to make a sale, including manufacturing and operating costs. By subtracting these costs from the sales price of \$7.97, Musika arrived at an incremental profit margin to plaintiffs of \$2.89 per unit. By multiplying \$2.89 by 188,229 sales, the result is an award of \$543,982 to plaintiffs for the profits lost during the Infringement Period.

2. Damages for the Provisional Rights Period

The parties agree that plaintiffs are due a reasonable royalty for the time between publication of the application and issuance of the '851 Patent. *See* 35 U.S.C. § 154(d). If there is no established royalty for the patent at issue, the reasonable royalty may be based upon the supposed result of hypothetical negotiations between the plaintiff and defendant. *Rite-Hite*, 56 F.3d at 1554 (citations omitted). The hypothetical negotiation requires the court to envision the terms of a licensing agreement reached as the result of a supposed meeting between the patentee and the infringer at the time infringement began. *Id.* Courts look to the factors articulated in *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970), in determining the reasonable royalty rate.

The *Georgia-Pacific* factors are as follows:

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of

territory or with respect to whom the manufactured product may be sold.

4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.

5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promotor.

6. The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.

7. The duration of the patent and the term of the license.

8. The established profitability of the product made under the patent; its commercial success; and its current popularity.

9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.

10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.

11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.

12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

14. The opinion testimony of qualified experts.

15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement.

Georgia-Pacific, 318 F.Supp. at 1120.

Champion sold 101,762 infringing filter elements during the provisional rights period. Plaintiffs' expert, Mr. Musika, opines that a reasonable royalty would amount to \$2.50 per unit. Such a royalty would lead to a damages award of \$254,405. Defendant's expert, Dr. Choi, opines that the reasonable royalty should be capped at what defendant spent to develop its non-infringing Core Adapter - \$86,500. Defendant relies on *Grain Processing* for this proposition.

In *Grain Processing*, the plaintiff owned a patent with claims to certain food products called maltodextrins. Defendant made and sold an infringing maltodextrin. The district court awarded a reasonable royalty for the infringement. "The district court also found that [defendant's] production cost difference between infringing and noninfringing [maltodextrins] effectively capped the reasonable royalty award." *Id.* at 1347. Defendant demonstrated that it only cost 2.3% more to manufacture the non-infringing product than the infringing one. The district court ultimately awarded a 3.0% royalty after factoring in price fluctuations for materials and the value to defendant of eliminating the risk of infringement by obtaining a license. Neither party challenged the reasonable royalty analysis on appeal.

Here, defendant has offered evidence that it spent \$86,500 to design the Core Adapter. Plaintiffs argue that *Grain Processing* is inapplicable, because *Grain Processing* looked at the incremental, ongoing increase in processing costs to manufacture the non-infringing product rather than the cost to develop it. The Court disagrees. The Court finds the logic of the

district court in *Grain Processing* persuasive. In conducting a hypothetical negotiation, the Court must consider what defendant would be willing to pay as a willing licensor. *Georgia-Pacific*, 318 F.Supp. at 1120. The Court agrees with defendant that it would not be willing to pay more than it would have expended to develop a non-infringing alternative.

Accordingly, plaintiffs are awarded \$86,500 for the sales that occurred during the Provisional Rights Period.

3. Prejudgment Interest

As stated above, the Patent Act provides that, upon a finding of infringement, “the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.” 35 U.S.C. § 284. Plaintiffs seek simple interest at a rate of 8%. Defendant urges the Court to exercise its discretion and decline to award interest. Both parties rely on *Gen’l Motors Corp. v. Devex Corp.*, 461 U.S. 648 (1983), in support of their positions.

The *Devex* court determined that the portion of 35 U.S.C. § 284 referring to the payment of interest “strongly suggests that prejudgment interest should ordinarily be awarded where necessary to afford the plaintiff full compensation for the infringement.” *Devex*, 461 U.S. at 654. *Devex* went on to state:

The standard governing the award of prejudgment interest under § 284 should be consistent with Congress’ overriding purpose of affording patent owners complete compensation. In light of that purpose, we conclude that prejudgment interest should ordinarily be awarded. In the typical case an award of prejudgment interest is necessary to ensure that the patent owner is placed in as good a position as he would have been in had the infringer entered into a reasonable royalty agreement. An award of interest from the time

that the royalty payments would have been received merely serves to make the patent owner whole, since his damages consist not only of the value of the royalty payments but also of the forgone use of the money between the time of infringement and the date of the judgment.

We do not construe § 284 as requiring the award of prejudgment interest whenever infringement is found. That provision states that interest shall be “fixed by the court,” and in our view it leaves the court some discretion in awarding prejudgment interest. For example, it may be appropriate to limit prejudgment interest, or perhaps even deny it altogether, where the patent owner has been responsible for undue delay in prosecuting the lawsuit. There may be other circumstances in which it may be appropriate not to award prejudgment interest. We need not delineate those circumstances in this case. We hold only that prejudgment interest should be awarded under § 284 absent some justification for withholding such an award.

[A] decision to award prejudgment interest will only be set aside if it constitutes an abuse of discretion.

Id. at 655-56, 656-57.

Plaintiffs state that simple interest of 8% should be awarded.¹² Plaintiffs assert that interest for the damages due on the Provisional Rights Period should be calculated as of June 2005 - the date the patent was published - and that interest due on the Infringement Period should be calculated as of January 2006 - the date the patent issued. Simple interest at 8% on the lost profits damages of \$543,982 equals \$97,917. Neither party calculates what the interest would be on an award of \$86,500.¹³

¹²

Plaintiffs rely on www.munichreamerica.com, which states the interest rate for 2007 was 8%.

¹³

Plaintiffs do calculate the interest on their desired royalty of \$254,405. Such simple interest at 8% totals \$57,665.

Defendant complains that plaintiffs' method presumes all of the damages would have been due at the beginning of the Provisional Rights Period and Infringement Period. Defendant argues that because infringing sales were made throughout the time-frame at issue, interest should be calculated on a month-by-month basis. Defendant also urges the Court to apply the interest rate that is imposed on Ohio's state courts. *United Steelworkers of America v. Roemer Indus.*, 68 F.Supp.2d 843, 849 (N.D. Ohio 1999). Plaintiff chose not to respond to defendant's arguments but, rather, stated it would rest on its initial position.

Ohio Rev. Code § 1343.03 provides that a judgment creditor is "entitled to interest at the rate per annum determined pursuant to Ohio Rev. Code § 5703.47." Section 5703.47 provides that the tax commissioner shall determine the "federal short-term rate" and that "[f]or purposes of any section of the Revised Code requiring interest to be computed at the rate per annum required by this section, the rate determined by the commissioner under this section, rounded to the nearest whole number per cent, plus three per cent shall be the interest rate per annum used in making the computation for interest that accrues during the following calendar year." Ohio Rev. Code § 5703.47. Defendant states the interest rate was 5% for 2005 and 6% for 2006. It is not clear whether these stated interest rates include the "three per cent" that is to be added pursuant to the statute.

The Court agrees with defendant that, if interest is to be awarded, the interest should not be calculated on the full amount of damages from the beginning of each of the damages periods and that the interest rate should be determined by the statute. However, defendant fails to provide the Court with a calculation of the interest under its preferred formulation. Accordingly, defendant is hereby ordered to submit within ten days of issuance of this Order

a calculation of the simple interest for each damages period at the rate provided for in Ohio Rev. Code § 5703.47 including a statement of (1) the number of infringing units sold per year during both the Provisional Rights Period and the Infringement Period; (2) the interest rate used; and (3) the basis for determining that interest rate.¹⁴

CONCLUSION

For the foregoing reasons, plaintiffs are awarded \$86,500 in damages for the Provisional Rights Period. Plaintiffs are further awarded \$543,982 in lost profits for the Infringement Period. Defendant is ordered to submit a calculation of prejudgment interest as detailed above. Defendant's motion to exclude the U.S. Patent No. RE38,917 is DENIED. Defendant's motion to exclude the testimony of Dr. Garriss is DENIED. Defendant's motion to exclude the testimony of Mr. Musika is DENIED. Defendant's motion for leave to supplement is DENIED.

IT IS SO ORDERED.

/s/ Patricia A. Gaughan
PATRICIA A. GAUGHAN
United States District Judge

Dated: 4/22/08

¹⁴

No judgment shall enter until the issue of prejudgment interest is resolved. *Worldwide Biologicals, Inc. v. Leon Indus.*, 754 F.2d 376 (6th Cir. 1984) (dismissing appeal for lack of jurisdiction where there was no final, appealable order under 28 U.S.C. § 1291 in that district court had yet to rule on plaintiff's request for prejudgment interest).